

YOUR
LETTERS

MAILBOX

Our new look gets mixed reviews, our on-sale dates continue to confuse and one reader wants the mag ditched in favour of a DVD. We're even testing marital bonds this month

★ Star Letter Security issues with sensitive data



May's article on computer forensics was fascinating. Thank you! In the 1980s and early 1990s, the privacy issue would have stopped with hard disks and perhaps floppy disks. But these days, companies and individuals use an array of gadgets to store data, including highly sensitive details such as passwords, bank details, financial statements and so forth.

Mobile phones, PDAs, Flash drives, rewritable CDs and DVDs and even MP3 players can all hold sensitive data. Their owners would want to be sure this data was thoroughly deleted before selling, giving away or discarding them.

Are there any security issues with Flash memory given that it relies on electron tunnelling, a principle of quantum physics?

Alan Thomas

Flash memory works in a different way to hard and floppy disks. It uses transistors to store data rather than magnetism. While we're all familiar with the staying power of magnetism, which can leave a trace after being overwritten numerous times, it's hard to see how a transistor might carry residual data. However, scientists have shown that data can be left on memory chips even after files have been deleted.

This applies not just to Flash memory but to regular PC RAM, too. Peter Gutmann, of the University of Auckland in New Zealand, researches security techniques and systems, and has written a paper

called *Data Remanence in Semiconductor Devices*. This explains why different types of volatile and non-volatile memory can remember data even when powered off or when the files have been erased. It's complicated stuff, but it concerns data 'rusting' into the memory's substrate.

Another peculiarity of Flash memory is that it has a limited, albeit large, lifetime of writes and erases. Eventually, after a certain number of cycles, you won't be able to delete the files. It's hard to predict how many cycles the memory has left, but in normal use you should never reach the limit. If you run security software that performs lots of disk overwrites to protect the data, the lifetime of the memory will be reduced and it might not even render the data unreadable.

Ultimately, there is no commonly accepted method for securely deleting data. You could do what the US Air Force recommends and melt it down.



▲ Flash drives can still carry residual data, even after files have been deleted

CONTACT US

LETTERS PAGE

letters@computershopper.co.uk

TECHNICAL ADVICE

helpfile@computershopper.co.uk
softwarehelp@computershopper.co.uk
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WRITE TO US AT

Computer Shopper,
30 Cleveland Street,
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BROADBAND FAIR USE



I read with interest last month's letter called 'The outer limits' (*Shopper* May 2006). It concerned Tiscali restricting the use of its 2Mbit/s service at peak times and whether it should be allowed to advertise this service as 'unlimited'. I had a few thoughts, which I'd like to share.

1. You say that the ASA considers advertising on Tiscali's own website to be editorial and outside of its scope. That made me wonder. Does the ASA police adverts that Tiscali places on other websites apart from its own?

2. You say Tiscali displays its fair use policy clearly. Well, I agree, it does now. When I signed up before Christmas 2005, however, the signup page displayed an asterisk that stated "fair usage policy applies". I tried to find this policy on Tiscali's website, because it was not available to read during sign-up. I failed to do so, even using its own site search tool and reading through its help pages. I could not read its definition of 'fair use' at the time.

3. It occurred to me that if (a) people are writing to *Computer Shopper* because they were confused by the term 'unlimited use', asking if it is legal, and (b) a

supplier makes subtle changes to the wording for printed adverts to comply with the law but continues to use confusing terms on its own website, then it is not doing everything possible to be straight with potential customers. Doing so might just lose them some sales. This is particularly true in the case of technically savvy *Computer Shopper* readers, who are likely to be shopping around online comparing current price deals between ISPs.

Paul Hewitt

In answer to your first question, the ASA does police adverts that a company places on other websites. It considers material as editorial only if it is placed on the company's own site.

Currently Tiscali's editorial marketing material makes its terms and conditions clear. This has not always been the case with many suppliers and, over the past few months, the industry and, more importantly, consumers have paid attention to the small print. Unfortunately, even if you read this closely, you might find your ISP of choice changes its policy. This month BT decided to limit "excessive" use of its broadband service (see *News*, page 249) and there is no reason why other



ISPs won't follow suit if they think that subscribers are being selfish.

The problem is that due to the way broadband internet works, how you use it affects other people. Heavy users can hog bandwidth, which means slow download speeds for others.

ISPs claim, quite convincingly, that people are illegally using file sharing systems to download movies, pirated software and music. We would like to see ISPs target users they know to be behaving illegally before picking on those with a legitimate need for massive downloads.

That said, Tiscali appears to have a particularly fair way of dealing with people who use the internet heavily during peak hours. According to a spokesperson for the ISP, "the intention is not to kick people off the service but to use more sophisticated methods to make things fair". After three warnings, the individual concerned will find that their bandwidth starts to reduce, but only during times when the network is busy.

CLOSE TO HOME

✉ After reading the Star Letter about why we should upgrade to Windows Vista by Gareth Evans (*Shopper* May 2006), I still don't see why I should upgrade.

I have been using Windows XP Home Edition for over six months and I haven't had a single problem. First, I don't care if there is a pretty desktop. I can do my work just as well on a plain desktop. I don't write software, so heaps will be of no use to me.

I doubt Windows Vista will be any safer than Windows XP. My security programs Norton AntiVirus and AVG Free Edition don't seem to slow my system down and I have never experienced driver problems. So why should I spend £500 on something I don't need?

Guanghui Wu

We agree a shiny new interface is not a good enough reason to upgrade. You don't need to be a developer to benefit from heaps, though. Potentially software will run faster and we all like it when programs run quickly. While we hope you never experience problems with your PC, six months with a clean Windows XP system is not long enough to judge whether or not you will suffer serious crashes.

It makes sense not to fix something unless it is broken, so we'd also agree that running out and peeling off 500 crisp ones is not the best idea if you're happy with your PC, it works properly and it is secure. You might change your mind when Windows XP ceases to receive security updates, though, or when you next install hardware with buggy drivers.

When the latest games, office programs or whatever you are interested in run only on Windows Vista, you may want to upgrade. Maybe full backward-compatibility with Windows XP will be available, but only time will tell.

You should also consider running just one anti-virus program rather than two. Some people think they get better protection, assuming that if one program misses a virus maybe the other won't, but often the opposite is true. The real-time scanners, which constantly monitor your system, need sole access. Running more than one can cause clashes. In turn, these can cause crashes. At worst, viruses could infect the system

undetected. Before you decide which one to ditch, read our anti-virus software review on page 129. You might be surprised at our results.

DIGITAL VISION

✉ Subscribing to not just one but two computer magazines a month is putting my marriage at serious risk. The problem is not cost; as I am a self-employed IT consultant, the magazines are tax deductible and a legitimate expense. Nor is the problem a matter of spending too much time or money on the contents. It is what to do with them once they have been read and replaced by the latest edition.

My wife, a wonderful but house-proud woman, is intolerant to my occupation. I try as best I can to store past editions in an orderly fashion. Whatever I do, last month's editions are soon accompanied by this month's next to the toilet, at the side of the bed and so on.

It is with this – and the effect on the environment – in mind that I would like to offer a solution. I would prefer to receive my magazines on DVD. I am sure many others would, too. The reduction in Mr Dennis's postage bill alone has got to be worth consideration. The environmental gesture won't hurt his chances in the New Year's honours list, either. There are fewer carbon emissions from transportation, and increased capacity at landfill sites. I am sure there are a lot more reasons I could think of, too.

Seriously, I would welcome the option of receiving your monthly publications on disc. You must surely be in a position to offer this, and it shouldn't take a great deal of effort. Your advertisers would benefit in the long term; searching for components would be far easier and comparisons would be a doddle. There could even be links direct to websites.

Paul Cannon

In theory it's a nice idea, Paul. We are always looking at innovative ways to deliver our work to as many people as possible, in the most convenient way. How many other readers would like to receive their magazines in digital form? Are CDs and DVDs the answer, or would you rather download pages from the internet to a PDA or Ultra Mobile PC (see *News*, page 249)?

A fair few readers allude to toilet-based reading material in their letters, as you do. Would

this environment suit a magazine stored on an electronic device? We want to hear your views.

SHOCK TO THE SYSTEM

✉ Recently the hard disk on my laptop failed, which caused the system to crash on startup. I tried everything, but the computer kept failing, even in Safe Mode. Fortunately, my data was on a different partition from the operating system, so I decided to bite the bullet and use the recovery discs that came with the machine.

The recovery didn't work and the PC kept up its infinite crashing loop. It's now back with the manufacturers being repaired under warranty.

Of course, I backed up all my data before this happened... Well, no, I didn't, actually. I have been working in the computer industry for 10 years, so feel free to hurl abuse at me.

This has made me realise how vulnerable we are to system failures, especially when our only computer is a laptop. Backup is a confusing topic. An article covering the various strategies and packages available would be well-timed. Reviews on system and file backup software packages and how to use them would be even better. I feel an external hard disk will be my next purchase, or some form of network attached storage.

I've been reading the magazine for years and love it. Keep up the good work. One day I may even get round to subscribing.

Stephen Holdway

For information on backing up, you could read *Advanced Windows*, *Shopper* March 2006. This tutorial focused on disk imaging rather than file-based backups, which would have been perfect for your broken hard disk.

Running regular backups is, as you've found to your cost, a boring task usually ignored until you experience at least one data disaster. Now is the time to get it sorted and ensure you never lose files again.

You should also read the Labs test on network storage on page 101. *Upgrade Workshop* on page 216 even explains how to add one of these cheap network file repositories. We must deserve your subscription now.

Glad you liked the redesign. We put lots of work into it to make the magazine easier to read and pack it with more information than ever. Most people are very happy with it...



WRITE IN AND WIN!

Adobe has kindly agreed to give a bundle of its popular Photoshop Elements and Premiere Elements software to this month's Star Letter writer, furnishing Alan with a powerful graphics program familiar to professional graphic designers, as well as the top-notch video-editing package Premiere Elements 2.0. Photoshop Elements 4.0 enables you to edit and enhance your digital photos easily and effectively, while Premiere Elements makes it simple to edit your own home movies like a pro.



PLUS!

Every letter-writer also receives a Computer Shopper mug





DIFFICULT BY DESIGN

 In *Shopper* May 2006 your editorial concludes, "We hope you like it". Well, in a nutshell, I don't. The type being used is too fine for my poor eyesight and it's no longer a pleasure to read the magazine.

I can't see the point unless you're trying to save ink. As for headings turned on their side, again, where's the point? I won't go on, except to say that it seems to me there's too much change for the sake of change.

Roy E Ward

Have you any idea how much a barrel of ink costs these days? Actually, stinginess with ink was the last thing on our minds when we set out to revamp *Computer Shopper*.

Most of the changes in the new-look *Shopper* have been in response to reader requests. As *Labs* and *What's New* are consistently voted your most-read sections, we've made them work better together with a standardised testing methodology that means you can directly compare performance figures for any two products reviewed in any two articles or issues of *Shopper*. We've also added more *Help* pages because of this section's strong showing when we asked readers to name their three favourite sections in the 2006 Readers' Survey.

We realise type changes can affect those with poorer eyesight, so before our redesign we asked whether readers would prefer a smaller font size with more words per page or a larger font size with fewer words per page. Over 90 per cent said our text was about right. Consequently, our new look uses exactly the same type for the body of articles. Slight changes to page layout have allowed us to cram a few more words on to

each page, but we haven't had to shrink the text in order to do so.

We think the change you're referring to is to the headline font used in reviews. We have switched to a more modern, finer font for this, but didn't anticipate any legibility problems because it's still relatively large. So far, your letter is the only one we've had about this being hard to read, but if any other readers are having difficulties with the new fonts we'd like to hear about it.

KEEPING IT CLEAN

 I am looking to sell one of our desktop computers but, having read the article on forensic data recovery ('Recovery Position', *Shopper* May 2006), I now have my doubts about selling the hard disk with it.

I was planning to perform a clean install of Windows XP Home Edition, which includes formatting the hard disk. Would this be enough to keep our data safe?

Andy Ainge

Formatting your disk does not actually remove the data stored on it. Neither does deleting the files manually. When you do either operation, the operating system deletes the table and directory entries that it uses to find the files on the disk. This makes the files disappear in Windows, but the file data itself is left on the disk.

The only way to prevent someone with the right software reading this data is to write lots of random data over the original files more than once. There are loads of utilities available that can do this. If you have the DVD edition of the magazine, you'll find a program called Eraser in the Expert Toolkit that does just this.

This will prevent data recovery using easily available software, but it may not defeat a forensics expert. If you have severely sensitive data on the disks, you should remove them and either keep them locked up or physically destroy them (see the reply to our Star Letter).

HAVE A NICE DATE

 12th February: Oh, to be in England, now that the April *Shopper* is here.

11th March: It's Mayshopper Day. Will June *Shopper* be busting out all over on the 10th April? And are you eventually aiming to publish three months before the cover date?

Tom Ruben

Ah, yes, that old chestnut. The reason all computer magazines' on-sale dates lost touch with reality has disappeared in the mists of time. However, the reason we can't do anything about it now is simple. We write a technology-led magazine and a large number of our readers buy it to stay up to date with PC developments. This means that if you went into a newsagent in March and saw the March edition of *Shopper* next to the April editions of our competitors, you'd be inclined to buy what appeared to be the most up-to-date magazine. We might enjoy some sort of moral high ground for accurately reporting the month, but we'd also lose circulation pretty fast.

The only solution is for every computer magazine publisher in the UK to agree to stick to sensible dates and not start edging forward in a sneaky bid to steal a few sales from the others. Sadly, this is less likely to happen than an early release of Windows Vista (see *News*, page 248).

COMPUTER SHOPPER

SHOPPER OFFICE

Editor Paul Sanders
paul@computershopper.co.uk
 Technical Editor Simon Edwards
simon@computershopper.co.uk
 Reviews Editor David Ludlow
david@computershopper.co.uk
 Commissioning Editor Lynley Oram
lynley@computershopper.co.uk
 Consumer Editor Emma Winfield
 020 7907 6260
 Admin Assistant Nicola Gibson
 News Editor Paul Nesbitt
news@computershopper.co.uk

PRODUCTION

Managing Editor Steve Haines
 Production Editor Jane Goulding
 Sub-Editor Amy John
 Art Editor Colin Mackleworth
 Designer Anand Parmar
 Group Art Editor Bill Bagnall

SHOPPER LABS

Labs Editor Tom Royal
tom@computershopper.co.uk
 Senior Staff Writer Simon Handby
simonh@computershopper.co.uk
 Staff Writer Seth Barton
seth@computershopper.co.uk
 Staff Writer Chris Finnermore
chris@computershopper.co.uk
 Staff Writer Alan Lu
alan@computershopper.co.uk

ADVERTISING

Fax 020 7907 6600
ads.shopper@dennis.co.uk
 Group Advertising Manager
 Jonathan Kitchen 020 7907 6616
 Account Manager Ben Topp
 020 7907 6625
 Senior Sales Executive Karren Cook
 020 7907 6642
 Sales Executive Louise Antoniou
 020 7907 6620
 Classified Sales Executive
 Zoe Overthrow 020 7907 6669
 New Media Director Dan Newman
 020 7907 6803
 New Media Account Manager
 Fiona Stedman 020 7907 6812
 List Rental Nerys Church 020 7907 6140

ADVERTISING PRODUCTION

Fax 020 7907 6066
 Operations Director Pete Wootton
 020 7907 6299
 Production Executive Lawrence
 Brookes 020 7907 6062

COVER CD/DVD CONTACTS

Luke Walker 020 7907 6330
 Graham Smith 020 7907 6335

SUBSCRIPTIONS

Tel 0845 126 0389
 Fax 01454 620080
compshopper@cisubs.co.uk

CONTRIBUTORS

contributors@computershopper.co.uk
 Adam Banks, Perry Banton, Matt
 Chapman, Steve Clack, Mel Croucher,
 Kay Ewbank, Mike James, Cliff Joseph,
 MacBiter, James Middleton, Chris
 Miller, Helen Morrison, Paul Mullen,
 James Nixon, Ben Pitt, David Robinson,
 Janet Swift, Jon Thompson, Karl Wright

PHOTOGRAPHY

Jamie McGovern and Lindy Duong

MARKETING

Marketing Manager Claire Childs
 Marketing Design Manager Alex Patrick
 Marketing Production Controller
 Kerry Lambird

MANAGEMENT

Tel 020 7907 6000
 Publishing Director John Garewal
 Group Advertising Director
 Julian Lloyd-Evans
 Circulation Director Martin Belson
 Finance Director Brett Reynolds
 Group Finance Director Ian Leggett
 Chief Executive James Tye
 Chairman Felix Dennis

PRINTING

Printed by Herons, Maldon, Essex
 Cover printers Ancient House, Ipswich
 Distributors Seymour 020 7396 8000

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The Editor is always pleased to receive ideas for articles, preferably sent first in outline form, with details of the author's background and, where available, samples of previously published work. We cannot, however, accept responsibility for unsolicited copy and it may take time for us to reply.

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The June *Shopper* will be out much later than you predict: 20th April. We can promise we won't put out an issue a full three months before the cover date. Two months is just right – for now.

STAR GAZING

I found Janet Swift's 'How to... Use Data Validation in Excel' in the May 2006 issue very interesting. The article itself was spot on, but I did notice that in the pictured example at the bottom of the page (Step 8), Janet used the names of *Stargate SG-1* characters from the TV series. I'm a big fan of *Stargate SG-1* and I was confused that the characters Janet chose were (how can I put it?) up to date but well out of date.

For example, Jack O'Neil left at the end of the last season. Daniel Jackson is OK, and so is Samantha Carter, but Cameron Mitchell took over from Jack O'Neil at the beginning of this season. Janet Frasier died about two seasons ago, and George Hammond makes only brief appearances now.

I'd also like to praise everybody at *Computer Shopper* for putting together this great magazine. Congratulations on the redesign, which looks great and reads brilliantly. I didn't think it could get any better, but you've proved me wrong. I particularly liked the 20 free utilities on the cover disc and the feature about them (*Shopper* May 2006).

Graham

Let it never be said that science-fiction fans are preoccupied with detail. Lynley, our resident *Stargate* expert, thought you might be interested to know that in next month's issue Jonas will be formatting a CV, Jacob Carter will be creating a

family tree, while Kawalsky and Feritti will demonstrate how you use Friends Reunited. Apparently *Stargate* fans will get the in-jokes there. Impressed? "It's what we do."

ANTI-SEMANTIC

Oh dear. In your reply to Mr Dempster ('Space Evader', *Letters, Shopper* May 2006), you refer to your confusion of 'tax evasion' with 'tax avoidance' as a syntactical error, compounding your original error with another one.

The error referred to is a semantic one, semantics being the study of meaning. Syntax is quite different, being the study of word order or sentence structure. Tax evasion and tax avoidance are syntactically identical.

The lesson endeth with an example of syntactical difference, as seen in 'A car ran over the cat' versus 'The cat was run over by a car'. Despite the syntactical difference, the two sentences are almost semantically identical – that is, they mean roughly the same.

Gert Ronberg

The person who drafted the reply to Mr Dempster and made the heinous error actually has a degree in English literature and philosophy, so we thought he would be the ideal candidate to reply to your correction:

"The last time I was accused of making a syntactical error was while programming a ZX Spectrum in 1985. But you are right about my mistake in confusing syntax with semantics. I would like to counter your assertion with a quote from Ferdinand de Saussure (yes, I know he was into semiotics and not semantics), who said: 'Am I bowered, though?'"

Next month

Budget PCs

We test low-cost system units you can combine with an existing monitor for a cheap upgrade or with your favourite new screen for a gorgeous custom PC

Hard Disks

Our ultimate hard disk labs puts 24 PATA and SATA models to the test

Personal Media Players

Take music, video and photos on the move with these pocket-size wonders

Colour Laser Printers

Brighten up your paperwork with an affordable workgroup printer

Graphics Tablets

These pressure-sensitive pads give you a new level of control over photo-editors and other graphics software

Presentation Software

Who makes the best software to help you get your message across?

Digital Rights

We explain the practical implications of the copy-protection technologies used by today's online music stores

Home Automation

Achieve domestic bliss by putting your lights, hi-fi and coffee-maker under the control of your PC

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from 18th May 2006**

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